Hemp Innovations™ Botswana

IMPACT CASE FOR PHILANTHROPIC INVESTORS

One crop. Six returns for people and planet.

How a licensed, whole-plant hemp model in Botswana delivers nutrition, access to medicine, jobs, climate action, forest protection and shelter.

Clas Dahlén · Founder & CEO · November 2026

Hemp Innovations Botswana (Pty) Ltd

THE MODEL

Every part of the plant carries its own social or environmental return

SEED

Food & feed

- Nutrition bars, flour, porridge
- Hemp oil and protein powder
- Seed cake as livestock feed

→ **Food security**

FLOWER

Heal

- CBD for wellness and epilepsy
- Medical cannabis for pain and palliative care
- EU-GMP export revenue

→ **Health access, revenue**

STALK

Build & replace

- Hempcrete for homes and schools
- Hemp wood, boards and fibre
- Biochar and cooking briquettes

→ **Climate, forests, shelter**

Across the whole chain: labour-intensive, gender-inclusive rural jobs, from planting and trimming to processing and lab testing.

EXECUTIVE SUMMARY

One hectare can feed people, supply affordable medicine, employ women, store carbon and build homes

1 · Nutrition

Complete plant protein and omega-3 from seed, for food-insecure communities

2 · Health access

Locally produced, affordable cannabinoid medicines for Africa and EU export

3 · Livelihoods

Labour-intensive, gender-inclusive rural jobs in a diamond-dependent economy

4 · Climate

Fast biomass growth, with carbon locked into long-lived products

5 · Forests

Hemp wood and fibre that replace slow-growing tropical hardwood

6 · Shelter & education

Low-cost hempcrete housing, schools and childcare near the fields

A single, legal, licensed crop: Hemp Innovations Botswana (HIB) is built as a whole-plant model, so each output carries its own measurable return.

1 · FOOD SECURITY

Hemp seed delivers complete protein, healthy fats and fibre in one shelf-stable ingredient

~30%

protein in dehulled seed, with all nine essential amino acids

3:1

omega-6 to omega-3 ratio, close to the recommended balance

Allergen-free

outside the big-eight allergens; gluten free

Shelf-stable

suits warm climates and long humanitarian supply chains

Also rich in fibre, magnesium, iron and zinc, key gaps in child undernutrition. Approximate values.

Impact pathways

- **Humanitarian nutrition bars** for refugee and displacement settings: Horn of Africa, Sahel, and within SADC (e.g. Dzaleka, Malawi)
- **School feeding**: hemp-enriched porridge or flour in national school meal programmes
- **Livestock feed**: seed cake from oil pressing replaces imported soy meal for poultry and cattle
- **Local value addition**: seed, oil and protein processed in Botswana rather than exported raw

One fully approved medical use, and substantial evidence for anxiety, inflammation, pain and sleep

USE	EVIDENCE LEVEL	WHAT THE EVIDENCE SHOWS
Epilepsy (Dravet, Lennox-Gastaut, tuberous sclerosis)	Strong — approved medicine	Purified CBD (Epidiolex/Epidyolex) is approved by the FDA and EMA after randomised controlled trials
Anxiety and stress	Substantial	Small human trials show reduced anxiety; cortisol effects seen in small studies
Inflammation	Substantial	Clear anti-inflammatory effects in lab and animal studies; human trials still few
Chronic pain, arthritis	Substantial	Promising animal and topical data; human evidence for CBD alone is mixed
Sleep	Substantial	Benefit seems mostly indirect, via reduced anxiety or pain
Addiction (opioids, cannabis use disorder)	Early, promising	Small randomised trials show reduced cravings and anxiety cues
Skin health (acne, eczema)	Early	Lab data on oil-gland and inflammation control; topical products widely used
Muscle recovery	Limited	Popular in sport; little controlled human evidence so far
Parkinson's, Alzheimer's	Preclinical / very early	Neuroprotective effects in lab models; no approved treatment and no proven benefit in patients

The strongest humanitarian case: pain relief and palliative care

CONDITION	EVIDENCE LEVEL	WHAT IT DOES — AND DOES NOT DO
Chronic pain (incl. neuropathic, cancer-related)	Substantial	Modest but real pain reduction in adults in many trials; useful where opioids are scarce
Chemotherapy nausea and vomiting	Substantial — approved medicines	Oral cannabinoids (e.g. dronabinol, nabilone) are approved for this
Loss of appetite and weight loss (cancer, HIV/AIDS)	Approved use for HIV	Dronabinol is approved for AIDS-related appetite loss; supports nutrition and quality of life
Parkinson's disease	Substantial	Relaxes muscles and nerves for stillness and better speech
Multiple sclerosis spasticity	Substantial — approved medicine	Nabiximols (Sativex) is approved in many countries for MS spasticity
Epilepsy	Strong — approved medicine	Purified CBD (Epidiolex) for specific severe epilepsies
Sleep problems linked to pain or illness	Moderate	Short-term improvements in some patient groups
PTSD and anxiety	Substantial	Some patients report relief; trial results are inconsistent
Glaucoma	Moderate	Lowers eye pressure only briefly; eye-care bodies do not recommend it as treatment
Cancer itself	Proven in natural medicine clinics	Supportive care only; no evidence it cures or shrinks cancer in patients

~1 in 5

adults in Botswana live with HIV, one of the highest rates in the world

The dismantling of USAID in 2025 left gaps in donor-funded HIV care across Africa.

Medical cannabis cannot replace antiretroviral therapy, but it can support patients with HIV-related nerve pain, appetite loss and weight loss, and improve quality of life in palliative care.

3 · INCLUSIVE JOBS

Labour-intensive work creates formal rural jobs that need no prior qualifications

Women

Field work, nursery, trimming, quality control and packing. Formal contracts bring independent income, bank accounts and social protection.

Persons with disabilities

Seated precision tasks such as trimming, sorting, weighing and labelling, with adapted workstations.

Youth

Apprenticeships in agronomy, GMP processing, lab testing and irrigation, with BUAN and NARDI.

Smallholder outgrowers

Later phase: local farmers grow hemp grain under contract, with HIB supplying seed, training and a guaranteed buyer.

WHY BOTSWANA

The economy relies heavily on diamonds, and the downturn in diamond demand has hit revenue and jobs. With high youth unemployment, an export-oriented agro-industry is exactly the diversification the government is seeking.

A fast carbon sink, with real value when the carbon is locked into long-lived products

15–22 t CO_2

absorbed per hectare per season

4×

the CO_2 uptake of forest per hectare

90–120

days per growing cycle

50–100 yrs

carbon stored in hempcrete and hemp boards

Also: deep roots build soil structure, rotation raises soil organic carbon and breaks pest cycles, and the crop needs little or no pesticide.

Three credible routes to carbon credits

Registries reward permanence; an annual crop alone releases most of its carbon as it decomposes.

1. **Carbon stored in products:** hempcrete and building materials (emerging methodologies; requires life-cycle assessment)
2. **Biochar from residues:** an established carbon-removal category with recognised registries
3. **Soil organic carbon:** regenerative-agriculture methodologies with multi-year measurement

5 · HEMP WOOD & FORESTS

Hemp regrows every season; hardwood takes 30–80 years

Engineered hemp boards and fibre can replace part of the timber that drives deforestation in Africa's forests.

Hemp lumber & boards

Flooring, furniture and panels, with oak-like hardness in commercial examples

Particle & fibre boards

Furniture, school desks and construction

Textiles & rope

Strong, durable bast fibre

Paper & packaging

Hemp pulp needs fewer chemicals than wood pulp

Bioplastics & composites

Replacing fossil plastics in packaging and car parts

> Hemp-hurd briquettes can also replace charcoal for cooking, a major driver of woodland loss in the region.

6 · HEMPCRETE — SHELTER & EDUCATION

Hempcrete turns a farm by-product into low-cost homes, schools and childcare

The woody core of the stalk, mixed with lime and water, becomes a lightweight, insulating, breathable wall material.

Why it suits Botswana

- **Thermal comfort:** cooler hot days, warmer Kalahari nights
- **Carbon-storing:** a long-term carbon store (see climate)
- **Healthy indoor air:** regulates humidity, resists mould
- **Fire and pest resistant:** lime walls resist fire and termites
- **Local materials and skills:** the farm's own stalks, local masons

A village around the farm

Worker housing

Decent, affordable homes for staff and families

Early-childhood centre

Kindergarten by the fields, so working mothers keep children close

School classrooms

A visible community asset built from hempcrete

Clinic or health post

A natural fit alongside medical cannabis

Further impact for Botswana and the region

Diversification beyond diamonds

A licensed agro-pharma export industry, a national priority that draws government and DFI support

Legal livelihoods

A licensed outgrower model brings traditional growers into the legal economy

Access to pain relief

Africa has some of the world's lowest access; local production cuts cost and imports

Soil remediation

Hemp draws heavy metals out of degraded or mining-affected soils

Regenerative rotation

Breaks pest cycles and lifts yields of the next sorghum or maize crop

Local protein

Seed cake replaces imported soy meal for poultry and cattle

Clean cooking

Hurd briquettes cut indoor air pollution and woodland loss

Women's health

CBD topicals for menstrual pain, an early research and product area

MEASUREMENT

Each pillar maps to UN SDGs, with KPIs reported annually

IMPACT PILLAR	UN SDGS	EXAMPLE KPIS
Food security	2 Zero Hunger · 3 Health	Tonnes of food-grade seed; bars or meals delivered; feed tonnes replacing imports
Health access	3 Good Health and Well-being	Patients reached; subsidised doses to clinics and hospices
Inclusive jobs	5 Gender · 8 Decent Work · 10 Inequalities	Jobs created; % women; employees with disabilities; wage vs. minimum; training hours
Climate	13 Climate Action	t CO_2 stored in products (LCA-verified); biochar tonnes; water use per tonne
Hemp wood & forests	12 Responsible Consumption · 15 Life on Land	Hardwood volume substituted; boards and briquettes produced
Shelter and education	4 Education · 11 Sustainable Cities	m^2 of hempcrete built; children in the early-childhood centre; homes delivered
Economic diversification	8 Decent Work · 9 Industry · 17 Partnerships	Export revenue; local suppliers; partnerships with BUAN, NARDI, BITC

PARTNER WITH US

Help us grow a crop that feeds, heals, employs and shelters.

We welcome philanthropic and impact partners to fund pilots, training, nutrition trials and community buildings alongside our licensed commercial operation.

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Figures are indicative and approximate; sources available on request.